APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,966	03/02/2004	Santosh P. Gaur	RPS920020014US1	2143

25299 7590 05/10/2007	EXAMINER	
IBM CORPORATION	KANE, CORDELIA P	
PO BOX 12195		
DEPT YXSA, BLDG 002	ART UNIT	PAPER NUMBER
RESEARCH TRIANGLE PARK, NC 27709	2109	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

		Application No.	Applicant(s)
Office Action Summary		10/790,966	GAUR ET AL.
		Examiner	Art Unit	
		Cordelia Kane	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 March 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-26</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>02 March 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/4/04</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to the non-provisional application filed on March 2,

2004. Claims 1 – 26 are pending. Claims 1, 12, and 22 are independent.

Information Disclosure Statement

2.   The information disclosure statement filed October 4, 2004 fails to comply with

37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance,

as it is presently understood by the individual designated in 37 CFR 1.56(c) most

knowledgeable about the content of the information, of each patent listed that is not in

the English language. It has been placed in the application file, but the information

referred to therein has not been considered.

Specification

3.   The disclosure is objected to because of the following informalities: In the

opening paragraph reference is made to copending applications but the application

numbers and filing dates are left blank.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5.　　　Claims 1 – 9, 12 – 17, and 20 – 26 are rejected under 35 U.S.C. 102(b) as being

anticipated by Lee Noehring et al's US Publication 2002/0188839. Referring to claim 12,

Noehring teaches:

　　　a.　　　Transferring data packets from the network to memory (page 1, paragraph

　　　6).

　　　b.　　　Retrieving a data packet from memory (page 3, paragraph 34).

　　　c.　　　Performing security operations on the data packet (page 1, paragraph 6).

　　　d.　　　Storing the operated on portion of the data packet (page 1, paragraph 6)

　　　e.　　　Transferring the processed data packets to the network (page 1,

　　　paragraph 6)

6.　　　Referring to claim 1, Noehring teaches a system (page 2, paragraph 24) for

performing the method of claim 12 and therefor the system of claim 1.

7.　　　Referring to claim 22, Noehring teaches RAM (page 1, paragraph 9) and other

computer readable mediums for performing the method of claim 12 and therefor the

computer readable medium of claim 22.

8.　　　Referring to claim 2, Noehring teaches:

　　　f.　　　An input Data Memory Access (DMU) configured to exchange secure data

　　　packets with the network (Figure 3, 308+310).

　　　g.　　　An output Data Memory Access (DMU) configured to exchange non-

　　　secure data packets with another portion of the network (Figure 3, 320+322).

9.   Referring to claim 3, Noehring teaches converting serial data to parallel data and parallel data to serial data. Noehring teaches that the data as it goes through the crypto core engine is running on multiple parallel processing threads (column 7, line 17). Before the data enters the crypto core it is in a FIFO format (Figure 3, 308) and afterwards it is in the same format (Figure 3, 320). Therefor it is inherent that the data is converted from a serial format to a parallel format and back.

10.   Referring to claim 13, Noehring teaches:

        h.   Encrypting (or obscuring) outbound (or non-secure) data packets (page 3, paragraph 31).

        i.   Decrypting (or deciphering) inbound (or secure) data packets (page 3, paragraph 31).

        j.   Determining the integrity of the data by performing security checks (page 3, paragraph 32).

11.   Referring to claim 4, Noehring teaches a system (page 2, paragraph 24) for performing the method of claim 13 and therefor the system of claim 4.

12.   Referring to claim 23, Noehring teaches RAM (page 1, paragraph 9) and other computer readable mediums for performing the method of claim 13 and therefor the computer readable medium of claim 23.

13.   Referring to claim 14, Noehring teaches performing quality assurance operations in coordination with the security operations (page 4, paragraph 40).

14.   Referring to claim 5, Noehring teaches a system (page 2, paragraph 24) for performing the method of claim 14 and therefor the system of claim 5.

15.   Referring to claim 24, Noehring teaches RAM (page 1, paragraph 9) and other

computer readable mediums for performing the method of claim 14 and therefor the

computer readable medium of claim 24.

16.   Referring to claim 15, Noehring teaches:

    k.   Identifying the information flow (source and destination) associated with

    the packet (page 5, paragraph 47).

    l.   Determining the priority (size) of the information flow (page 4, paragraph

    40).

    m.   Scheduling the transferring or receiving based on the priority (page 4,

    paragraph 40).

17.   Referring to claim 6, Noehring teaches a system (column 3, lines 49-50) for

performing the method of claim 15 and therefor the system of claim 6.

18.   Referring to claim 25, Noehring teaches RAM (page 1, paragraph 9) and other

computer readable mediums for performing the method of claim 15 and therefor the

computer readable medium of claim 25.

19.   Referring to claim 16, Noehring teaches:

    n.   Decrypting the portion of data (page 8, paragraph 72) prior to identifying

    the information flow (page 8, paragraph 78) of the inbound (secure) data packet.

    o.   Encrypting (obscuring) the portion of data (Figure 8, 824) after identifying

    the information flow (Figure 8, 814) of the outbound (non-secure) data packet.

20.   Referring to claim 7, Noehring teaches a system (page 2, paragraph 24) for

performing the method of claim 16 and therefor the system of claim 7.

21.   Referring to claim 17, Noehring teaches:

p.   Encapsulating (compressing) the outbound (non-secure) data packets

before they are encrypted (page 5, paragraph 45).

q.   The inbound (secure) data packets are decrypted (page 8, paragraph 74)

before the encapsulation is removed (page 8, paragraph 78).

22.   Referring to claim 8, Noehring teaches a system (page 2, paragraph 24) for

performing the method of claim 17 and therefor the system of claim 8.

23.   Referring to claim 26, Noehring teaches RAM (page 1, paragraph 9) and other

computer readable mediums for performing the method of claim 17 and therefor the

computer readable medium of claim 26.

24.   Referring to claim 20, Noehring teaches:

r.   Including error correcting code with the data packets (page 6, paragraph

61).

s.   Detecting errors in the data based on the code (page 7, paragraph 62).

25.   Referring to claim 21, Noehring teaches referencing memory in a sequence to

reduce access time (page 5, paragraph 52).

26.   Referring to claim 9, Noehring teaches a system (page 2, paragraph 24) for

performing the method of claim 21 and therefor the system of claim 9.

Claim Rejections - 35 USC § 103

27.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

28.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.,* 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
        obviousness or nonobviousness.

Claims 10, 11, 18 and 19 are rejected under 35 USC 103 (a) as being obvious over

Noehring in view of John Trost et al's US Patent 4,627,018. Referring to claim 18,

Noehring discloses all the limitations of the parent claim. Noehring does not appear to

explicitly disclose grouping the memory requests together. However, Trost discloses

grouping the memory requests together and not starting the second group before the

first group is completed (column 2, lines 5-8). Noehring and Trost are analogous art

because they are from the same field of endeavor of memory access. At the time of the

invention, it would have been obvious to one of ordinary skill in the art, having the

teachings of Noehring and Trost before him or her, to modify Noehring to include

grouping read and write requests, then completing one group before the other of Trost.

The motivation for doing so would have been to eliminate the time gap between the

groups of requests (column 1, lines 42-45). Therefor it would have been obvious to

combine Trost with Noehring to obtain the invention as specified in the claim 18.

29.   Referring to claim 10, Noehring teaches a system (page 2, paragraph 24) for

performing the method of claim 18 and therefor the system of claim 10.

30.   Referring to claim 11, Noehring and Trost teach all the limitations of the parent

claim. Noehring goes on to teach:

     t.   Including error correcting code with the data packets (page 6, paragraph

     61).

     u.   Detecting errors in the data based on the code (page 7, paragraph 62).

31.   Referring to claim 19, Noehring teaches receiving (reading) data packets from

memory in predetermined byte sizes (page 3, paragraph 34).

     Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Cordelia Kane whose telephone number is 571-272-

7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.

     If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Joseph Del Sole can be reached on 571-272-1130. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CPK

KIMBERLY D. NGUYEN
PRIMARY EXAMINER